

State of California  
AIR RESOURCES BOARD

EXECUTIVE ORDER A-10-542  
Relating to Certification of New Heavy-Duty Motor Vehicle Engines

FORD MOTOR COMPANY

Pursuant to the authority vested in the Air Resources Board by Sections 43100, 43102 and 43103 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-45-3;

IT IS ORDERED AND RESOLVED: That the following Ford Motor Company 1993 model Otto-cycle engine is certified for use in motor vehicles with a manufacturer's gross vehicle weight rating (GVWR) of 8,501 to 14,000 pounds:

Fuel Type: Gasoline

| <u>Engine Family</u> | <u>Liters (Cubic Inches)</u> | <u>Exhaust Emission Control Systems and Special Features</u>                                                                              |
|----------------------|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| PFM07.5BSA3          | 7.5 (460)                    | Secondary Air Injection<br>Exhaust Gas Recirculation<br>Heated Oxygen Sensor<br>Multiport Fuel Injection<br>Three Way Catalytic Converter |

Engine models and codes are listed on attachments.

The following are the certification emission standards for this engine family in grams per brake-horsepower-hour:

| <u>Total Hydrocarbons</u> | <u>Carbon Monoxide</u> | <u>Nitrogen Oxides</u> |
|---------------------------|------------------------|------------------------|
| 1.1                       | 14.4                   | 5.0                    |

The following are the certification emission values for this engine family in grams per brake-horsepower-hour:

| <u>Engine Family</u> | <u>Total Hydrocarbons</u> | <u>Carbon Monoxide</u> | <u>Nitrogen Oxides</u> |
|----------------------|---------------------------|------------------------|------------------------|
| PFM07.5BSA3          | 0.2                       | 13.2                   | 4.1                    |

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the materials to demonstrate certification compliance with the Board's emission control system warranty provisions (Title 13, California Code of Regulations, Section 2035 et. seq.).

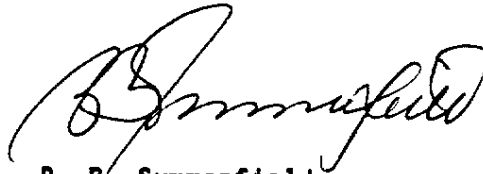
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Engines certified under this Executive Order must conform to all applicable California emission regulations.

The Bureau of Automotive Repair will be notified by copy of this order and attachments.

Executed at El Monte, California this 20<sup>th</sup> day of January, 1993.

A handwritten signature in cursive script, appearing to read "R. B. Summerfield", is written over a horizontal line.

R. B. Summerfield  
Assistant Division Chief  
Mobile Source Division

**1993 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET  
HEAVY DUTY ENGINES**

Manufacturer Ford Motor Company Engine Family PFM07.5BSA3 (P7.5A)

Liters (CID) 7.5L (460) Fuel Type Gasoline Engine Config. V-8

Emission Control Sys. (Special Features) AIR/EGR/HO2S/MFI/TWC  
(Use abbreviations per SAE J1930 Jun88)

| Engine Code | Rated HP @ RPM | Ign. System or PCME | Fuel System      | EGR Valve        | Catalyst         |
|-------------|----------------|---------------------|------------------|------------------|------------------|
|             |                | Part No. -12A650-   | Part No. -9F593- | Part No. -9F483- | Part No. -5E212- |
| 3-97A-R00   | 245 @ 4200     | F3TF-DA             | F1TE-DA          | F3TE-AA          | E3TA-FC          |
| 3-98A-R00   | 245 @ 4200     | F3TF-KA             | F1TE-DA          | F3TE-AA          | E3TA-FC          |
| 3-98E-R00   | 245 @ 4200     | F3TF-JA             | F1TE-DA          | F3TE-AA          | E3TA-FC          |
| 3-98F-R00   | 245 @ 4200     | F3TF-FA             | F1TE-DA          | F3TE-AA          | E3TA-FC          |

Comments: See 20.09.17.02-1 for abbreviations and 20.09.17.02-4 for evaporative emission family identification.

Engine Family: P7.5A

Issue Date: NOV 30 1992

20.09.17.02-2

Revised:

20091702.2

## 1993 AIR RESOURCES BOARD SUPPLEMENTAL DATA SHEET

Manufacturer Ford Motor Company Engine Family PFM07.5BSA3 (P7.5A)  
 Evaporative Family HN Engine Type V-8  
 Liters (CID) 7.5L (460)

## ABBREVIATIONS:

| <u>Ignition System</u>         | <u>Exhaust Emissions Control System</u>           | <u>Fuel System</u>                                  |
|--------------------------------|---------------------------------------------------|-----------------------------------------------------|
| PCM-Powertrain Control Module  | AIRD-Secondary Air Injection                      | DFI-Direct Fuel Injection (Diesel)                  |
|                                | ECT-Engine Coolant Temp Sensor                    | EIC-Electronic Injection Control (Diesel)           |
|                                | EGR-Exhaust Gas Recirculation                     | CAC-Charged Air Intercooler or Aftercooler          |
|                                | EM-Engine Modification                            | IFI-Indirect Diesel Fuel Injection                  |
|                                | HO2S-Heated Oxygen Sensor                         | MPI-Multipoint Electronic Fuel Injection            |
|                                | KS-Knock Sensor                                   | SC-Supercharged                                     |
|                                | MAP-Manifold Absolute Pressure Sensor             | SFI-Sequential Multipoint Electronic Fuel Injection |
|                                | OC-Oxidation Catalyst                             | TAA-Turbocharged, Air to Air (Diesel)               |
|                                | O2S-Oxygen Sensor                                 | TAW-Turbocharged, Air to Air to Water (Diesel)      |
| <u>Special Features</u>        | TAB-Secondary Air Inj. Bypass                     | TBI-Throttle Body Electronic Fuel Injection         |
| MIL-Malfunction Indicator Lamp | TAD-Secondary Air Inj. Diverter                   |                                                     |
| OBD-On Board Diagnostics       | SPL-Smoke Puff Limiter                            |                                                     |
|                                | TOC-Trap Oxidizer: Continuous                     |                                                     |
|                                | TOP-Trap Oxidizer: Periodic                       |                                                     |
|                                | TPS-Throttle Position Sensor                      |                                                     |
|                                | TWC-Three Way Catalyst                            |                                                     |
|                                | TWC+OC-Three Way Catalyst Plus Oxidation Catalyst |                                                     |
|                                | WU-OC-Warm Up Oxidation Catalyst                  |                                                     |
|                                | WU-TWC-Warm Up Three Way Catalyst                 |                                                     |

VEHICLE MODELS: E250/E350/Stripped or Cutaway  
F250/F350

Engine: Front XXX Mid      Rear       
 Drive: FWD      RWD XXX 4WD Full Time      4WD Part Time     

Engine Family: P7.5A

Issue Date: NOV 30 1992

20.09.17.02-1

Revised:

2017020.1